

The effects of unemployment and perceived job insecurity: a comparison of their association with psychological and somatic complaints, self-rated health and life satisfaction

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Abstract

Purpose Research has provided convincing evidence for the adverse effects of both short- and long-term unemployment, and perceived job insecurity on individuals' health and well-being. This study aims to go one critical step further by comparing the association between short- and long-term unemployment, and perceived job insecurity with a diverse set of health and well-being indicators.

Methods We compare four groups: (1) secure permanent employees ($N = 2257$), (2) insecure permanent employees ($N = 713$), (3) short-term unemployed ($N = 662$), and (4) long-term unemployed ($N = 345$) using cross-sectional data from the nationally representative Living Conditions Survey in Finland.

Results Covariance analyses adjusted for background variables support findings from earlier studies that long-term unemployment and perceived job insecurity are detrimental: short-term unemployed and secure permanent employees experienced fewer psychological complaints and lower subjective complaints load, reported a higher self-rated health, and were more satisfied with their life compared to long-term unemployed and insecure permanent employees. Second, whereas unemployment was found to be more detrimental than insecure employment in terms of life satisfaction, insecure employment was found to be more detrimental than unemployment in terms of psychological complaints. No differences were found regarding subjective complaints load and self-rated health.

Conclusions Our findings suggest that (1) insecure employment relates to more psychological complaints than short-term unemployment and secure permanent employment, (2) insecure employment and long-term unemployment relate to more subjective complaints load and poorer health when compared to secure permanent employment, and (3) insecure employment relates to higher life satisfaction than both short- and long-term unemployment.

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Introduction

Over the last 20 years, globalization along with the economic recession has put considerable strain on the labour market. Therefore, organizations have been forced to cutback costs, resulting in job loss and increased perceptions of job insecurity among workers (Daly et al. 2013;

Kalleberg 2000, 2011). These phenomena, in turn, have raised concerns about their potential impact on employees' health and well-being.

Unemployment typically refers to individuals between the age of 16 and 64 who do not have a paid job or are not self-employed during a specific reference period even though they are physically and psychologically available for work and actively seeking employment (International Labour Organization, ILO 2000). There is convincing evidence from diverse fields such as life sciences (e.g. medicine) and social sciences (e.g. psychology) that unemployment has adverse effects that go beyond effects associated with income loss (for a review see Frey 2008; McKee-Ryan et al. 2005). First, unemployment negatively impacts physical health as reflected in outcomes typically used in medicine, such as a significantly higher likelihood of cardiovascular disease (Griep et al. 2014; McKee-Ryan et al. 2005), psychosomatic disorders (Griep et al. 2014; Paul and Moser 2009), and subjective physical health (Griep et al. 2014; McKee-Ryan et al. 2005). Second, unemployment has been related to indicators of psychological ill-being such as feelings of depression, anxiety, and decreased life satisfaction (McKee-Ryan et al. 2005; Mohr and Otto 2011; Paul and Moser 2006, 2009).

Perceived job insecurity is defined as a subjective phenomenon that concerns uncertainty about an involuntary loss of the current job in the future (De Witte 2005; Sverke et al. 2002). It has significant adverse effects on self-rated health and psychological well-being. Specifically, perceived job insecurity relates to poorer physical health such as somatic health complaints (e.g. Ferrie et al. 2002; Mohren et al. 2003), poorer self-rated health (Ferrie et al. 2005), coronary heart disease (Lee et al. 2004), hypertension (Levenstein et al. 2001), and obesity (Ferrie et al. 2002). In addition, perceived job insecurity has been found to relate to poorer psychological health and well-being, for example, psychological distress (Virtanen et al. 2002) and minor psychiatric morbidity (e.g. Ferrie et al. 2005; Rugulies et al. 2006).

Despite this strand of research, little is known about the relative impact of unemployment and perceived job insecurity for individuals' health and well-being, perhaps because associated research comes from different streams of literature. This is nevertheless an intriguing issue from a practical and theoretical point of view. From the perspective of practitioners and policy makers, the comparison of unemployment and perceived job insecurity may help to design interventions tailored to a specific risk group. That is, programs designed for unemployed individuals are unlikely to solve problems faced by job insecure employees for whom insecurity, rather than actual job loss, is problematic. Hence, life and social scientists need to tailor their interventions conditional upon the specific problematic aspects of unemployment and perceived

job insecurity. From a theoretical point of view, unemployment scholars state that unemployment is most problematic because it frustrates both manifest (i.e. income) and latent (i.e. time structure, social network, social identity, self-realization and activity, and participation in collective effort) functions of work (Jahoda 1982; Paul and Batinic 2010). Recent meta-analytical research (e.g. McKee-Ryan et al. 2005; Paul and Batinic 2010; Roelfs et al. 2012) supports the notion that frustration of these functions is associated with poor physical health and psychological well-being. Second, job insecurity scholars suggest that the anticipation of harm (i.e. job insecurity) can have effects as potent as experiencing the harm itself (job loss). This argument is based on Jacobson's role theory (1991) and Lazarus and Folkman's (1984) cognitive stress theory. In addition, job insecurity implies prolonged uncertainty (Dekker and Schaufeli 1995; Kasl et al. 1975) and uncontrollability (Vander Elst et al. 2011, 2014), which in turn, results in detrimental health and well-being consequences commonly found in unemployed samples. However, the direct comparison between unemployment and job insecurity in relation to health and well-being has to be tested by including confounding variables, and by considering whether the significant results are applicable to the current labour market.

In the present study, our aim is to compare these perspectives through a comparison of unemployment and perceived job insecurity in relation to health and well-being. More specifically, we argue that frustration of the manifest and latent functions of employment is more evident among unemployed individuals as they are instantly and fully deprived from both manifest and latent functions of employment. In contrast, perceived job insecurity does not immediately affect the benefits derived from the functions of employment. In addition, we account for potential differences between short-term and long-term unemployment. In line with the suggestions from the ILO (2000) and previous studies on employment in the field of life sciences (e.g. Maier et al. 2006) and social sciences (e.g. Griep et al. 2013), we chose a cut-off value of 12 months for long-term unemployment. Such cut-off values are furthermore typically applied in Finland, forming the context of the current study. To achieve this aim, we compared four employment status groups drawn from a large and representative Finnish sample and accounting for confounding variables. These four employment groups are: (1) secure permanent employees, (2) insecure permanent employees (3) short-term unemployed (1–12 months) and (4) long-term unemployed (more than 12 months). We see psychological complaints and life satisfaction as indicators of psychological well-being and subjective complaints load and self-rated health as indicators of physical health.

It is worth noting that we solely focus on the experiences of permanent employees and that we exclude temporary

employment (i.e. dependent employment of limited duration, fixed term contract work or temporary agency work). The reason for this exclusion is twofold. First, recent research (Bernhard-Oettel et al. 2005; De Cuyper and De Witte 2005, 2006, 2007; De Witte and Näswall 2003; Mauno et al. 2005) has found that perceived job insecurity increases job exhaustion and reduces job satisfaction and organizational commitment among permanent employees, whereas it does little in explaining the responses of temporary employees. In a similar vein, permanent employees experience higher levels of distress and poorer health when feeling insecure, whereas perceived job insecurity was not predictive for these outcomes in the group of temporary employees (e.g. Bernhard-Oettel et al. 2005; De Cuyper and De Witte 2005). This pattern of results can be explained with reference to the discrepancy between the level of expected and perceived job insecurity that is dramatic, unexpected, and unwelcome for permanent employees, while this is not the case for temporary employees (De Cuyper and De Witte 2006, 2007; De Witte and Näswall 2003; Mauno et al. 2005). Second, De Cuyper and De Witte (2008) highlighted the huge heterogeneity within the group of temporary workers in terms of volition. That is, some workers “have to” accept temporary employment because they do not have other alternatives, while others willingly accepted their assignment because it, for example, allows them to explore the labour market, to practise skills, or to get the job they want. Volition may hugely affect the outcomes considered, but would also hugely increase complexity of the study and was not included in the survey. For all of the above-cited reasons, we do not include temporary workers in this study and thus solely hypothesize that secure (versus insecure) permanent employment relates positively to physical health and psychological well-being.

Unemployment and its effects on psychological well-being and physical health

The previously mentioned negative relationship between unemployment and well-being and health can be understood with reference to the stress-reaction model (Zapf et al. 1996). According to the premises of this model, a prolonged exposure to a stressor—from short-term to long-term unemployment—will result in a linear decrease in health and well-being (Paul and Moser 2009; Zapf et al. 1996). The mechanism can be understood along insights from the latent deprivation model of Jahoda (1982): unemployment deprives individuals from income (i.e. manifest function of employment), structure in life, social contact outside the family, status and prestige, opportunities for self-realization and activity, and the ability to deploy one’s capacities to fully contribute to society (i.e. latent functions of employment). This in turn will cause strain in the

form of poorer physical health and psychological ill-being (Jahoda 1982; McKee-Ryan et al. 2005; Paul and Moser 2009). Indeed, with increased unemployment duration, the probability of finding a job declines as employers generally perceive long-term unemployment as signalling a problem, related to health issues, competences, or motivation. Hence, they prefer to hire short-term unemployed individuals over long-term unemployed individuals (Elsby et al. 2010). Additionally, long-term unemployment is a stressor, partly due to the decline in income and the increase in financial problems (Warr 1987). As a consequence, long-term unemployed individuals may feel deprived and powerless, which in turn will negatively impact their physical and psychological well-being. Accordingly, and in line with previous studies, we hypothesize:

Hypothesis 1 Short-term unemployed individuals have significantly fewer psychological complaints (H1a), lower subjective complaints load (H1b), a better self-rated health (H1c), and a higher life satisfaction (H1d) compared to long-term unemployed individuals.

Perceived job insecurity and its effects on psychological well-being and physical health

Perceived job insecurity is often conceptualized as a stressor, hence leading to strain (De Witte 2005; Sverke et al. 2002). This occurs, for example, via the loss of control over one’s work and life (Vander Elst et al. 2011, 2014), and the frustration of some basic psychological needs (Vander Elst et al. 2012). The evidence to date largely supports this assumption (for meta-analyses and reviews see Bohle et al. 2001; Cheng and Chan 2008; De Witte et al. 2015; Ferrie 2001; Probst 2005; Sverke et al. 2002). Recent evidence underlines the causal relationship between perceptions of job insecurity and physical and mental health. Specifically, several scholars (e.g. Cheng and Chan 2008; De Cuyper et al. 2012; Wichert 2002) found longitudinal evidence for the argument that job insecurity causes poorer physical health and psychological well-being, and not the other way around. In general, these studies seem to suggest that perceived job insecurity causes detrimental physical health and psychological well-being, in much the same way as unemployment does (Cheng and Chan 2008; De Witte 1999; Sverke et al. 2002). Accordingly, we hypothesize that secure (versus insecure) permanent employment relates positively to physical health and psychological well-being. Accordingly, and in line with previous studies, we thus hypothesize:

Hypothesis 2 Secure permanent employees have significantly fewer psychological complaints (H2a), lower

subjective complaints load (H2b), a better self-rated health (H2c), and a higher life satisfaction (H2d) compared to insecure permanent employees.

Comparing the relative importance of both unemployment and job insecurity

Perceptions of job insecurity correlate moderately to highly with subsequent job loss (Campbell et al. 2007; Dickerson and Green 2009). However, both concepts have mainly been addressed in different streams of literature. Although the existing studies that focussed on both unemployment and perceived job insecurity have led to useful insights, they are flawed with methodological issues and characterized by mixed findings. Specifically, some studies suggest that the anticipation (i.e. job insecurity) of a harmful experience (i.e. unemployment) could have similar detrimental effects than the harmful experience itself. These suggestions align with Lazarus and Folkman's (1984) cognitive stress theory and Jacobson's role theory (1991). According to several scholars (e.g. Dekker and Schaufeli 1995; Kasl et al. 1975; Vander Elst et al. 2011, 2014), the role of an insecure (permanent) employee is characterized by a lack of structure, clarity, prolonged uncertainty, and uncontrollability. This in turn results in detrimental health and well-being consequences commonly found in unemployed samples. For example, Roskies et al. (1993) argued that insecure (permanent) employees had anxiety scores as high as commonly found among the unemployed. However, they did not directly compare unemployed individuals and job insecure (permanent) employees in relation to their anxiety scores. In addition, Iversen and Sabroe (1988) stated that job insecure (permanent) employees had only slightly higher scores of general self-rated health than the unemployed; they did not test whether this difference was statistically significant. Burchell (1994) and De Witte (1999) found no statistical difference between insecure (permanent) employees and unemployed respondents when comparing their self-rated health scores. Similarly, Cobb and Kasl (1977) indicated that job insecurity was as harmful as being unemployed in terms of affective well-being. However, these authors did not account for the potential impact of confounding variables. In addition, studies with a greater variety of health and well-being variables are needed, as previous studies have mainly used only one indicator (General Health Questionnaire, GHQ), which may—due to the response scale problems—underestimate the prevalence of mental health complaints (Mäkikangas et al. 2006).

In response, we provide a more stringent test and account for insights from the latent deprivation model by Jahoda (1982). The latent deprivation model (Jahoda 1982) argues that the unemployed are at a higher risk of

poor health and well-being. As stated above, Jahoda (1982) argues that poor health and well-being is caused by deprivation of the latent and manifest functions of employment. Satisfaction of these manifest and latent functions is associated with basic human needs and psychologically healthy life (Jahoda 1982; McKee-Ryan et al. 2005; Paul and Batinic 2010). Conversely, frustration of these functions is likely associated with poor psychological well-being. Such frustration is most evident among unemployed individuals as becoming unemployed leads to immediate loss of all functions of employment. This, in turn, creates incongruence between the desire to obtain these functions and perceived goal attainment. Such incongruence is expected to lead to ill health and psychological ill-being (Grawe 2004; Jahoda 1982). In contrast, job insecure permanent employees can still realize the benefits of the functions of employment in terms of basic human need satisfaction and psychological well-being (e.g. McKee-Ryan et al. 2005).

In line with Jahoda's latent deprivation theory (1982) and the empirical support for this framework, we argue that the immediate loss of manifest and latent functions associated with unemployment, short-term and especially long-term, relates to higher levels of psychological and physical complaints than job insecurity, as follows:

Hypothesis 3 Compared to the short-term unemployed, insecure permanent employees have significantly fewer psychological complaints (H3a), lower subjective complaints load (H3b), a better self-rated health (H3c), and a higher life satisfaction (H3d).

Hypothesis 4 Compared to the long-term unemployed, insecure permanent employees have significantly fewer psychological complaints (H4a), lower subjective complaints load (H4b), a better self-rated health (H4c), and a higher life satisfaction (H4d).

Methods

Procedure

Data were collected in 1994 by Statistics Finland as part of the nationally representative Living Conditions Survey among people aged 15 or older (Volanen et al. 2004). In total 11,843 individuals were contacted to participate in the survey, of which 8650 returned the survey, yielding a response rate of 73.04 %. For the purpose of this study, we focused on working aged individuals between 18 and 64 years old (excluding 1069 respondents). In addition, we excluded temporary workers ($N = 514$), those in

self-employment ($N = 1247$) and those outside the labour force ($N = 1843$). This reduced sample size of 3977 respondents is comprised of 75 % employed and 25 % unemployed individuals. This sample satisfactorily represents the non-institutional Finnish population aged 18 years or older (Heiskanen and Laaksonen 1996; Volanen et al. 2004). In addition, the economic situation shortly before (1991–1993) and during the study in 1994 is highly similar to the current economic situation in many aspects (i.e. annual GDP volume change, changes in unemployment rate and long-term unemployment, as well as the percentage of individuals perceiving job insecurity). First, in the years preceding 1994 (1991–1993) and 2014 (2009–2013), there has been a deep economic decline (-0.82 average GDP volume change in 1991–1993 versus -1.08 average GDP volume change in 2009–2013). Although the economy already recovered in 1994 ($+3.9$ GDP volume change), it is still recovering from the economic decline in the period 2009–2013. Second, unemployment rates were high in both periods, with an increase from 6.6 to 16.6 % in 1991–1993 and from 8.2 to 9.5 % in 2009–2013. Third, the proportion of employees perceiving a threat of temporary lay-off, a threat of dismissal, and/or a threat of unemployment increased from 17.8 to 32.7 % between 1991 and 1994, and from 20.8 to 34.8 % between 2009 and 2014. Although there are similarities between the Finnish economic situation in 1994 and 2014, there are also differences that should be taken into account when generalizing the results. For example, the recovered economic situation in 1994 may spark higher hopes of re-employment among the short-term unemployed, whereas this might not yet be the case in 2014. In contrast, the slower increase in unemployment rates in 2014 may influence the way one perceives a threat of unemployment. Thus, although the Finnish economic situation in 1994 and 2014 are mostly comparable, these important differences should be taken into account when generalizing the study's findings to the current labour market situation.

Participants

Of the respondents ($N = 3977$), half were female (50 %), mean age was 40 years ($SD = 10.4$), and mean length of education was 11 years ($SD = 3.2$). The majority of the participants were married or cohabiting (72 %), had 0.85 children less than 18 years old ($SD = 1.1$), had an average household income of 82,250 Fmk ($SD = 36,610$), and were living in an urban area (65 %). One-third of the respondents reported a long-term illness/injury (34 %). Employees represented different socio-economic groups: 33 % were blue collar workers, 38 % lower-level white collar workers and 29 % upper-level white collar workers. In the survey, we asked respondents to indicate their current occupation.

Occupations were given an occupational code based on the Occupational classification of Statistics Finland (AM L-87). On the basis of these occupational codes, respondents were classified into three socio-economic groups: upper-level white collar, lower-level white collar, and blue collar worker (see Volanen et al. 2004). The mean tenure with their current employer was 11.5 years ($SD = 8.9$).

Measurements

Independent variables

Perceived job insecurity was measured with three items: “Does your job carry any of the following uncertainties: threat of temporary lay-off, threat of dismissal, and threat of unemployment” (0 = no, 1 = yes) (Kinnunen and Nätti 1994). The Kuder-Richardson Formula 20 (KR-20) was used to assess the internal consistency reliability for measures with dichotomous response options (Kuder and Richardson 1937) and was 0.77. We considered those without any threats (i.e. scoring zero on the perceived job insecurity scale) as secure permanent employees ($N = 2257$), while we considered those with at least one threat (i.e. scoring 1 to 3 on the perceived job insecurity scale) as insecure permanent employees ($N = 713$).

Length of unemployment was measured with a single question enquiring about the continuous duration of unemployment in months. We made two groups: short-term unemployed individuals (1–12 months; $N = 662$) and long-term unemployed individuals (more than 12 months; $N = 345$).

We developed the categorical variable “employment status group” that combined the two-predictor criteria, thus defining four groups: (1) secure permanent employees ($N = 2257$), (2) insecure permanent employees ($N = 713$), (3) short-term unemployed individuals ($N = 662$) and (4) long-term unemployed individuals ($N = 345$).

Outcome variables: health and well-being indicators

Psychological complaints were assessed with nine items on a three-point Likert scale ranging from (1) “not at all” to (3) “much”. Respondents were asked how much they had suffered during the last month from any of the following psychological complaints: over-exhaustion, fatigue, apathy, lack of energy, sleeplessness, nervousness, irritability, depression, and irresolution. Statistics Finland made this scale ad hoc for the survey. However, similar items have been used in other studies (Kinnunen and Nätti 1994; Kirves et al. 2011; Talala 2013). A mean score was computed with a high score indicating more psychological complaints. This scale showed a good internal reliability score ($\alpha = 0.83$). We conducted a principal component analysis

with varimax rotation on the nine psychological complaint items, resulting in a one-factor solution (eigenvalue >1) with an explained variance of 35.40 %. Communalities values were all above 0.40, indicating that the items represented the factor adequately (Field 2009).

Subjective complaints load was assessed with eight items on a three-point Likert scale ranging from (1) “not at all” to (3) “much”. Respondents were asked how much they had suffered during the last month from any of the following somatic complaints: headache, stomach troubles, indisposition, dizziness, palpitations, irregular heartbeats, trembling hands, and over-perspiration. Statistics Finland made this scale ad hoc for the survey. However, similar items have been used in earlier studies (Kinnunen and Nätti 1994). A mean score was computed, with a high score indicating a higher subjective complaints load. This scale had a reasonable internal reliability ($\alpha = 0.64$). We conducted a principal component analysis with varimax rotation on the eight somatic complaint items. We initially obtained a two-factor solution, with headache, stomach troubles, and palpitations loading onto one factor, and all other indicators loading onto a separate factor. However, as previous studies used these items as a single factor, we forced these items to load onto one factor. The explained variance of this one-factor solution was 28.38 %, and the communalities values were all above 0.40 indicating that the items represented the factor adequately (Field 2009).

Self-rated health was measured using the following single question: “Is your state of health nowadays very good (= 5), good (= 4), average (= 3), poor (= 2), or very poor (= 1)?” This single item was created ad hoc by Statistic Finland, but has turned out to be reliable in a test–retest analysis (Lundberg and Manderbacka 1996; Martikainen et al. 1999). Additionally, it has predicted most risk factors and ill health indicators (Manderbacka et al. 1998), including mortality (Burström and Fredlund 2001; Idler and Benyamini 1997).

Life satisfaction was measured using the following single question: “If you think about your life in general during this moment/nowadays, are you very dissatisfied (= 1), rather dissatisfied (= 2), rather satisfied (= 3), or very satisfied (= 4)?”. While this single item was created ad hoc by Statistic Finland, similar single item measures of life satisfaction have been used in other studies (e.g. Lucas 2012).

Background variables

Some scholars (e.g. Griep et al. 2013; Kanfer et al. 2001; Paul and Moser 2009) have indicated that, for example, lower educated individuals are more likely to be found in “vulnerable” employment positions (e.g. blue collar positions, jobs with a limited amount of work-related resources)

with an increased likelihood of job insecurity or unemployment. Hence, these groups are at risk of the adverse effects of both short- and long-term unemployment and perceived job insecurity on health and well-being. Therefore, we controlled for these background variables when conducting our analyses. Background variables included gender (1 = women, 0 = men), age (in years), education (in years), marital status (1 = married/cohabited, 0 = others), children less than 18 years old living at home (number), income (per consumption unit in Fmk), type of living area (1 = urban, 0 = other), and long-term illness/injury (1 = yes, 0 = no). Income information was obtained from the tax register by using record linkage at the individual level. Income (Fmk) was adjusted by household composition using the following formula: first adult = 1.0, second adult = 0.7, and child below 18 years = 0.5 (Uusitalo 1997) to yield “net household disposable income per consumption unit” to account for the size of the household.

Statistical analysis

First, we examined correlations between the study variables and the differences in background variables between the four employment status groups either by one-way analysis of variance (continuous variables) or by cross-tabulation and Chi-square tests (categorical variables). Second, we used covariance analysis adjusted for those background variables in which the four groups differed significantly from each other to examine the differences between the four employment status groups in terms of the health and well-being indicators.

Results

Descriptive statistics

Correlations between the four health and well-being indicators (psychological complaints, subjective complaints load, self-rated health, and life satisfaction) ranged from -0.39 to 0.55 ($p < .01$). Correlations between the background variables and the health and well-being indicators ranged from -0.26 to 0.21 ($p < .01$) (Table 1). Note that not all correlations between the four health and well-being indicators and between the background variables and the health and well-being indicators were significant. Most of the correlations between the background variables and the health and well-being indicators were in line (i.e. similar magnitude of significance and direction of the effect) with correlations obtained from other Finnish studies (e.g. Kinnunen et al. 2004; Kirves et al. 2011; Mäkilangas and Kinnunen 2003). Based on these Finnish studies, it seems that

Table 1 Descriptive statistics and rank order correlations matrix ($N = 3977$)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
Gender (women)	0.50	0.50	-	0.04*	-0.01	0.02	0.04*	-0.01	0.01	0.02	0.13**	0.21**	0.02	0.11**
Age (in years)	39.68	10.41		-	-0.14**	0.17**	-0.17**	0.33**	-0.02	0.18**	-0.01	0.02	-0.26**	0.05**
Education (in years)	11.05	3.16			-	0.06**	0.12**	0.31**	0.16**	-0.11**	-0.01	-0.12**	0.20**	0.07**
Marital status (married/cohabiting)	0.72	0.45				-	0.36**	0.09**	-0.05**	-0.01	-0.05**	-0.02	-0.01	0.16**
Children <18 years (number)	0.85	1.08					-	-0.30**	-0.10**	-0.07**	-0.01	-0.03**	0.07**	0.02
Household income (1000 Fmk)	82.25	36.61						-	0.19**	-0.01	-0.02	-0.08**	0.03*	0.17**
Type of living area (urban)	0.65	0.48							-	-0.01	0.04**	-0.01	0.04**	-0.01
Long-term illness/injury	0.34	0.47								-	0.18**	0.24**	-0.39**	-0.07**
Psychological complaints	1.35	0.33									-	0.55**	-0.31**	-0.26**
Subjective complaints load	1.24	0.23										-	-0.39**	-0.16**
Self-rated health	3.94	0.80											-	0.21**
Life satisfaction	3.14	0.57												-

Mean for gender (women), marital status (married/cohabiting), type of living area (urban), and long-term illness/injury represents a percentage as these were dichotomous variables

* $p < .05$; ** $p < .01$; *** $p \leq .001$

the low correlations found between the health/well-being indicators and demographics (i.e. gender and age) are quite at the same level as the correlations obtained in the present study. One reason for the low correlations between the health/well-being indicators and age may relate to the fact that we only included individuals of working age, thereby excluding the oldest age groups. Based on the correlations obtained from previous Finnish studies, women seem to have a slightly higher level of both psychological complaints and subjective complaints load than men, which is a finding we replicated in the present study.

Differences in background variables by employment status groups

Table 2 shows significant differences between the four employment status groups in the distributions of the background variables. In line with the scope and hypotheses of this study, we will highlight the significant differences between (1) short-term and long-term unemployed individuals, (2) secure and insecure permanent employees, (3) short-term unemployed individuals and insecure permanent employees, and (4) long-term unemployed individuals and insecure permanent employees. First, short-term unemployed individuals were more often female, younger, higher educated, had a higher total household income, and were having less long-term illnesses/injuries than long-term unemployed individuals. Second, insecure permanent employees were higher educated and suffering from a long-term illness/injury than secure permanent employees. Third, insecure permanent employees were more often older, higher educated, married or cohabiting, having more children younger than 18 years living at home, having a higher total household income, and living in towns than short-term unemployed individuals. Fourth, insecure permanent employees were more often female, higher educated, married or cohabiting, having more children younger than 18 years living at home, having a higher total household income, and living in towns than long-term unemployed individuals. Long-term unemployed individuals suffered more often from a long-term illness/injury than the insecure permanent employees. In terms of being more or less typically than on average, our results indicate that short-term and long-term unemployed individuals were less typically married or cohabiting and less typically living in towns. Next, long-term unemployed individuals were less typically female and more typically suffering from a long-term illness/injury. Both insecure and secure permanent employees are more typically married or cohabiting. In addition, while secure permanent employees are more typically female and living in towns, they are less typically suffering from a long-term illness/injury. Given these

Table 2 Background characteristics by employment status (% or mean)

Characteristics	Group 1 Secure permanents <i>N</i> = 2257	Group 2 Insecure permanents <i>N</i> = 713	Group 3 Short-term unemployed <i>N</i> = 662	Group 4 Long-term unemployed <i>N</i> = 345	<i>F</i> / χ^2	Pairwise comparisons ^a	Total <i>N</i> = 3977
Proportion of women (%)	52.1 ^T	49.5	47.1	40.6 ^{AT}	29.18***	1 > 3, 4 2, 3 > 4	50.0
Mean age (years)	40.5 (SD = 9.8)	40.7 (SD = 9.3)	35.7 (SD = 12.0)	39.6 (SD = 11.2)	41.39***	1, 2, 4 > 3	39.7 (SD = 10.4)
Education (years)	11.3 (SD = 3.3)	11.8 (SD = 3.2)	10.3 (SD = 2.6)	9.4 (SD = 2.5)	64.35***	1, 2 > 3, 4 2 > 1 3 > 4	11.0 (SD = 3.2)
Proportion of married or cohabiting (%)	76.3 ^T	77.4 ^T	59.4 ^{AT}	56.5 ^{AT}	125.37***	1, 2 > 3, 4	72.0
Number of children less than 18 years (number)	0.88 (SD = 1.08)	0.95 (SD = 1.11)	0.78 (SD = 1.06)	0.61 (SD = 0.99)	6.94***	2 > 3, 4 1 > 4	85.0 (SD = 1.08)
Total household income per consumer unit (1000 Fmk)	89.54 (SD = 38.97)	87.89 (SD = 33.53)	63.72 (SD = 24.10)	59.60 (SD = 22.04)	151.48***	1, 2 > 3, 4 3 > 4	82.25 (SD = 36.61)
Proportion of living in towns (%)	68.2 ^T	66.2	56.6 ^{AT}	59.4 ^{AT}	35.87***	1, 2 > 3, 4	65.2
Proportion of long-term illness/injury (%)	31.5 ^{AT}	35.9	34.4	45.8 ^T	29.11***	2, 4 > 1 4 > 2, 3	34

^T more typical than on average and ^{AT} less typical than on average (adjusted residual >|2.0|). Chi-square test for non-continuous variables. Only significant pairwise comparisons are reported ($p < .05$)

* $p < .05$; ** $p < .01$; *** $p \leq .001$

^a Scheffe's test for continuous variables

Table 3 Estimated means (standard errors in parentheses) for outcome variables for the employment status groups—paired comparisons with Bonferroni test

Outcome	Group 1 Secure employees <i>N</i> = 2257	Group 2 Insecure employees <i>N</i> = 713	Group 3 Short-term unemployed <i>N</i> = 662	Group 4 Long-term unemployed <i>N</i> = 345	<i>F</i>	Partial eta squared
Psychological complaints	1.33 (0.01) ^{<2}	1.42 (0.01) ^{>1, 3}	1.35 (0.02) ^{<2, 4}	1.42 (0.02) ^{>3}	$F(3, 3961) = 18.95***$	0.014
Subjective complaints load	1.23 (0.01) ^{<2, 4}	1.27 (0.01) ^{>1}	1.25 (0.01)	1.28 (0.01) ^{>1}	$F(3, 3962) = 10.75***$	0.008
Self-rated health	3.98 (0.03) ^{>2, 4}	3.89 (0.03) ^{<1}	3.94 (0.03) ^{>4}	3.74 (0.04) ^{<1, 3}	$F(3, 3959) = 7.72***$	0.006
Life satisfaction	3.24 (0.02) ^{>2, 3, 4}	3.12 (0.02) ^{<1; >3, 4}	3.00 (0.03) ^{>4; <1, 2}	2.86 (0.03) ^{<1, 2, 3}	$F(3, 3956) = 61.98***$	0.045

Covariates included and corrected for estimated means of ANCOVA models for each outcome variable were gender, age, education, marital status, children less than 18 years old living at home, income, type of living area, and long-term illness/injury. In the pairwise comparisons for the significance level test, we used Bonferroni adjustment for multiple comparisons. Only significant pairwise comparisons are reported ($p < .05$). The superscript numbers indicate for which between-classes comparisons the means differ significantly ($p < .05$). The “<” or “>” preceding the superscript numbers indicate the direction of the significant difference in means

* $p < .05$; ** $p < .01$; *** $p < .001$

significant differences between the four employment status groups, we adjusted for all background variables (i.e. gender, age, education, marital status, number of children

less than 18 years living at home, income, type of living area, and long-term illness/injury) when performing the covariance analyses.

Differences in health and well-being indicators by employment status group

Psychological complaints

The covariance analysis adjusted for background variables indicated significant differences in the four employment status groups for psychological complaints, $F(3, 3961) = 18.95$, $p \leq .001$, Partial $\eta^2 = 0.014$, small effect size (Cohen 1992). The paired comparisons with Bonferroni test (see Table 3) revealed that short-term unemployed individuals and secure permanent employees reported significantly less psychological complaints than long-term unemployed individuals and insecure permanent employees. Thus, the findings were in line with hypothesis 1a and hypothesis 2a. However, these findings are contrary to hypothesis 3a as insecure permanent employees reported significantly more psychological complaints than short-term unemployed individuals. In addition, based on the paired comparisons with Bonferroni test, there was no significant difference between insecure permanent employees and long-term unemployed individuals; hence, hypothesis 4a did not receive support.

Subjective complaints load

The covariance analysis adjusted for background variables indicated significant differences in the four employment status groups on subjective complaints load, $F(3, 3962) = 10.75$, $p \leq .001$, Partial $\eta^2 = 0.008$, small effect size (Cohen 1992). The paired comparisons with Bonferroni test (see Table 3) revealed that secure permanent employees reported significantly less subjective complaints load than insecure permanent employees and long-term unemployed individuals. Thus, only hypothesis 1b was supported.

Self-rated health

The covariance analysis adjusted for background variables indicated significant differences in the four employment status groups on self-rated health, $F(3, 3959) = 7.72$, $p \leq .001$, Partial $\eta^2 = 0.006$, small effect size (Cohen 1992). The paired comparisons with Bonferroni test (see Table 3) showed that secure permanent employees and short-term unemployed individuals rated their health as significantly better than long-term unemployed individuals. The paired comparisons with Bonferroni test indicated that secure permanent employees rated their health better than insecure permanent employees. These findings provide support for both hypotheses 1c and 2c, but not for hypotheses 3c and 4c.

Life satisfaction

The covariance analysis adjusted for background variables indicated differences in the four employment status groups on life satisfaction, $F(3, 3956) = 61.98$, $p \leq .001$, Partial $\eta^2 = 0.045$, small effect size (Cohen 1992). According to the paired comparisons with Bonferroni test (see Table 3), employed (secure permanent and insecure permanent) individuals had higher life satisfaction than unemployed (short-term and long-term) individuals. Based on the paired comparisons with Bonferroni test, we also concluded that short-term unemployed individuals reported a significantly higher life satisfaction than the long-term unemployed individuals, thereby supporting hypothesis 1d. Similarly, secure permanent employees had higher life satisfaction than insecure permanent employees, thereby supporting hypothesis 2d. A paired comparisons with Bonferroni test indicated that insecure permanent employees reported significantly higher life satisfaction than short-term and long-term unemployed individuals, thereby supporting hypotheses 3d and 4d.

Sensitivity analysis in terms of three indicators of perceived job insecurity

As we relied on three indicators of perceived job insecurity (i.e. threat of temporary lay-off, threat of dismissal, and threat of unemployment) to create an overall perception of job insecurity, we carried out a sensitivity analysis to check if our above-described results hold when each of the indicators of perceived job insecurity were analysed separately. The same analytical approach than previously described was used, with one difference: instead of using overall perceived job insecurity as a predictor of the health and well-being indicators, three separate covariance analyses (i.e. one for each indicator of perceived job insecurity) adjusted for background variables were conducted. This sensitivity analysis revealed a similar pattern of results except for subjective complaints load. Specifically, using an overall indicator of perceived job insecurity or the indicator of “threat of temporary lay-off” resulted in the finding that secure permanent employees reported significantly less subjective complaints load than insecure permanent employees and long-term unemployed individuals (i.e. supporting hypothesis 1b). However, analyses with “threat of dismissal” and “threat of unemployment” as an indicator of perceived job insecurity additionally revealed that insecure permanent employees reported significantly more subjective complaints load than short-term unemployed individuals (i.e. contradicting hypothesis 3b).

Discussion

Despite the numerous studies on the negative effects of unemployment and perceived job insecurity on health and psychological well-being, little is known regarding the relative impact of unemployment and perceived job insecurity. To gain further understanding on this issue, we relied—in line with job insecurity scholars—on Jacobson's role theory (1991) and the work of Lazarus and Folkman (1984) when stating that perceived job insecurity can have detrimental effects on health and well-being as potent as unemployment. In addition, we refer to—in line with unemployment scholars—Jahoda's (1982) latent deprivation theory when stating that the frustration of the manifest and latent functions of employment is more evident among unemployed individuals than among job insecure permanent employees. When juxtaposing the rationale of these theoretical frameworks, we argued that unemployment may have more serious effects compared to perceived job insecurity as it deprives individuals from all functions of work, both manifest and latent. To test this assumption, we directly compared the psychological complaints, subjective complaints load, self-rated health and life satisfaction of four employment status groups using a large and representative Finnish sample: (1) secure permanent employees ($N = 2257$), (2) insecure permanent employees ($N = 713$), (3) short-term unemployed ($N = 662$), and (4) long-term unemployed ($N = 345$).

Our results suggest detrimental effects of both job insecurity and unemployment on psychological well-being and health, much in line with earlier studies (e.g. Cheng and Chan 2008; De Witte 1999; Ferrie et al. 2005; Levenstein et al. 2001; McKee-Ryan et al. 2005; Mohr and Otto 2011; Paul and Moser 2006, 2009; Rugulies et al. 2006; Virtanen et al. 2002). More specifically, short-term (versus long-term) unemployed individuals and secure (versus insecure) permanent workers reported less psychological complaints, less subjective complaints load, and a better health, and were more satisfied with their life. We would like to draw specific attention to the striking similarity between Jahoda's (1982) latent functions of employment (i.e. structure in life, social contact, status, self-realization, contribute to society) and several aspects commonly mentioned in definition of life satisfaction, such as (1) self-perceived ability to cope with daily life, (2) satisfaction with relations with others, (3) status and achievement of goals, (4) self-realization, and (5) participation or social embeddedness (e.g. Diener et al. 1985; Pavot et al. 1991). This conceptual similarity might explain why the strongest effect was found in terms of life satisfaction when comparing short- with long-term unemployed individuals and secure with insecure permanent workers. The results seem to suggest that both

job insecurity (versus job security) and long-term unemployment (versus short-term unemployment) are stressors, producing strain in different forms. These findings are in line with hypotheses 1 and 2, respectively. Short-term unemployed individuals had some characteristics that were more favourable on the labour market (i.e. younger, higher educational background, less reports of long-term illness/injury) than the long-term unemployed. Additionally, both the unemployment groups (i.e. short-term and long-term) more typically lived in urban areas where chances for re-employment are smaller. Finally, long-term unemployed individuals more typically suffered from a long-term illness/injury. Although these baseline differences could explain some of the results, they could not influence our results as we statistically controlled for this throughout the analyses.

A less straightforward pattern of results was obtained concerning the comparison of unemployment with perceived job insecurity in terms of health and well-being. Unemployment seemed to be worse than perceived job insecurity regarding life satisfaction: both short-term and long-term unemployed individuals reported to be less satisfied with their lives than job insecure permanent employees, as proposed in hypotheses 3d and 4d. Although both unemployment groups (i.e. short-term and long-term) had a significant lower total household income per consumer unit than the secure permanent and insecure permanent employees, these baseline differences could not influence the relationship with life satisfaction as we statistically controlled for this throughout the analyses. Perceived job insecurity seemed to be more problematic than short-term unemployment (and as problematic as long-term unemployment) regarding psychological complaints. However, no significant differences were found for subjective complaints load and self-rated health. Thus, our hypotheses 3 and 4 received full support only in relation to life satisfaction. At the most aggregate level, these results seem to indicate that long-term unemployment is at least as problematic as job insecurity, and more problematic than short-term unemployment. However, we would like to warrant some caution when interpreting this conclusion as our effect sizes were small, the data were cross sectional, and not all features of the Finnish economic situation are comparable in 1994 and 2014.

For perceived job insecurity, the picture is rather mixed. Both short- and long-term unemployment is worse than perceived job insecurity in terms of life satisfaction, thereby supporting the argument that being unemployed is worse than perceiving job insecurity (e.g. Jahoda 1982; McKee-Ryan et al. 2005; Paul and Batinic 2010). However, our results also seem to provide support for the argument that the anticipation of harm (i.e. job insecurity) can

have effects as potent as experiencing the harm itself (job loss) (Jacobson 1991; Lazarus and Folkman 1984). That is, job insecurity was found to be worse than short-term unemployment in terms of psychological complaints. This statement is also supported by our sensitivity analysis as the indicators “threat of dismissal” and “threat of unemployment” also resulted in more subjective complaints load among insecure permanent employees than among short-term unemployed individuals. However, in general this sensitivity analysis confirmed the results obtained from using an overall job insecurity indicator. Finally, no difference between job insecure permanent employees and unemployed individuals could be found regarding subjective complaints load and self-rated health. In response to the lack of statistical significant differences with regard to subjective complaints load and self-rated health, we follow Griep et al. (2014) who have argued that psychological well-being indicators might be impacted immediately after being confronted with a negative experience at work (i.e. job insecurity and short-term unemployment), while others—mainly physical complaints—might require more time to manifest themselves.

Consequently, our results seemed to both support and challenge the argument that job insecurity may be as bad as unemployment (Dekker and Schaufeli 1995). This argument was supported only in relation to psychological complaints, as insecure permanent employees reported more psychological complaints than short-term unemployed. At the same time, our results also support and challenge the claim made by unemployment scholars that unemployment is most problematic due to loss of fulfilment of manifest and latent functions of employment (Jahoda 1982; Paul and Batinic 2010). For example, insecure permanent employees reported significantly more psychological complaints than short-term unemployed individuals. Additionally, they reported more subjective complaints load than short-term unemployed individuals when perceiving either a threat of dismissal or a threat of unemployment (these results were not significant when using the overall indicator of perceived job insecurity or the indicator “threat of temporary lay-off”). These findings align with Jacobson’s role theory (1991) as it suggests that job insecurity poses a threat to the latent functions of employment in much the same way as unemployment does. Recently, scholars (e.g. De Cuyper et al. 2012; Vander Elst et al. 2013) indeed suggest that job insecure permanent employees perceive their latent functions of employment to be at risk.

This mixed pattern of findings is intriguing and calls for further research. A possible avenue is to distinguish the duration of exposure to job insecurity, namely acute and chronic job insecurity. In our study, this was not possible, as we could only differentiate between perceived job insecurity versus job security. Knowing the exposure time

may lead to a more accurate comparison. That is, chronic job insecurity may lead to higher levels of strain in a similar way as long-term unemployment does. Previous studies have shown that chronic job insecurity leads to poor self-rated health, a severely increased risk of minor psychiatric morbidity and premature mortality (e.g. Burgard et al. 2012; Ferrie 2001; Heaney et al. 1994; House et al. 1986). As the chronic nature of job insecurity continues unabated, the stressor might consume the employee’s resources, and hence, it jeopardizes the use of effective and appropriate coping strategies (e.g. the ability to adapt to or recover from the stressor) (Ashford 1988; Lazarus and Folkman 1984; Weich and Lewis 1998).

Limitations

Notwithstanding the novel insights obtained from this study, our study has some limitations that need to be taken into account. An obvious limitation concerns the age of our data, which might hinder generalizations to the present situation. However, most aspects of the Finnish economic situation (i.e. annual GDP volume change, changes in unemployment rate, long-term unemployment, and the percentage of individuals perceiving job insecurity) are very similar when comparing the situation before and during the study year in 1994 with those of 2014. However, we cannot really be sure that they are identical. Some groups, such as the short-term unemployed, might get higher hopes for re-employment when they perceive that the unemployment rates are lower or when the economic is recovering. As a consequence, they might become more optimistic and hence already experience more life satisfaction. In contrast, when the unemployment rates are increasing more steeply, employees might become more insecure about the future of their employment. For example, Burgard et al. (2012) recently documented the impact of the economic crisis on, for example, perceived job insecurity and found that it was linked to poor health outcomes, even among those who had jobs during economic turbulent times. Although there are a lot of similarities between the economic situation in 1994 and 2014, some differences should be taken into account when generalizing the results.

Second, the cross sectional nature of the study does not allow conclusions regarding causality. Besides the proposed relationships, it is equally possible that the proposed relationships are reversed or reciprocal. This reversed relationship between one’s mental and physical health to an individual’s employment status relates to the assumption that individuals with impaired health are more likely to become unemployed in the future (i.e. selection hypothesis). Several authors (e.g. Christensen et al. 2008; Herbig et al. 2013; Paul 2006; Paul and Moser 2009; Varekamp and van Dijk 2010) indeed found empirical evidence for

this selection hypothesis. However, meta-analytical evidence of Paul (2006) and Paul and Moser (2009) indicates that the effect sizes supporting the causation explanation (i.e. unemployment precedes ill health and ill-being) are nearly twice as large as the effect sizes supporting the selection explanation (i.e. ill health and ill-being precede unemployment). This leads the authors to conclude that the former effect is likely to be of greater practical importance than the latter effect. This conclusion is supported by meta-analytical (McKee-Ryan et al. 2005) and longitudinal (Griep et al. 2014) research. Although most studies support the causation explanation, this one-directional viewpoint does not fully capture the relationship between unemployment and health and well-being as there also is some evidence for the selection hypothesis. For example, in our study, the large proportion of individuals with a long-term illness/injury in the long-term unemployed group hints towards this selection hypothesis. However, we statistically controlled for this throughout the analyses. Nevertheless, selection into unemployment should be kept in mind when interpreting these results. In terms of the relationship between job insecurity and health and well-being, recent longitudinal studies seem to support our view that job insecurity affects well-being rather than vice versa (e.g. De Witte et al. 2015). In sum, although the effects of work characteristics (de Lange et al. 2004), unemployment (Griep et al. 2014; McKee-Ryan et al. 2005; Paul 2006; Paul and Moser 2009), and job insecurity (De Witte et al. 2015) on health and well-being are causally predominant, several studies found evidence for reciprocal relationships (Christensen et al. 2008; de Jonge et al. 2001; Demerouti et al. 2004; Herbig et al. 2013; Hornung et al. 2013; Paul 2006; Paul and Moser 2009; Varekamp and van Dijk 2010). Therefore, we warrant some caution when interpreting the discussed results in a causal way.

Third, we relied on the suggestions of the ILO (2000) and studies in the field of life and social sciences (e.g. Griep et al. 2013; Maier et al. 2006) when labelling those individuals that were unemployed for less than 12 months as short-term unemployed. However, some of the subjective complaints load indicators—such as irregular heartbeats and over-perspiration—might require more time to manifest themselves as a consequences of becoming unemployed, whereas psychological well-being indicators might be impacted immediately or in the short-term after becoming unemployed (e.g. most psychological complaints and life satisfaction) (Griep et al. 2014). Hence, we encourage future research to collect longitudinal (panel) data including similar psychological and subjective complaints load indicators to further our knowledge concerning the onset of specific psychological complaints and subjective complaints load indicators in the aftermath of unemployment.

A fourth drawback is that all measurements were based on self-reports, which may have inflated the association between the stressor (job insecurity) and ill-being and ill health (Watson and Pennebaker 1989). However, many of our health and well-being indicators can only be measured through self-reports (e.g. lack of energy, fatigue, sleeplessness, headache). Results from earlier studies have highlighted similar relationships with more objective indicators of health (Ferrie 2001; Griep et al. 2014; Probst 2005).

Fifth, although we compared different subgroups in terms of psychological complaints, subjective complaints load, self-rated health, and life satisfaction on the basis of the employment status, we wish to underline that the duration of one's unemployment can be considered a more objective employment status (i.e. one is either employed or unemployed), whereas job insecurity is considered a subjective perception concerning the perceived threat to one's current job in the future (De Witte 2005; Sverke et al. 2002). This implies that while one employee might perceive, for example, a threat of temporary lay-off as job insecurity, another employee might not perceive this threat of temporary lay-off as job insecurity. These individual differences in the extent to which one perceives threat to one's current job in the future as job insecurity might thus influence the obtained results as—based on our operationalization of perceive job insecurity—the first employee would be categorized as job insecure, while the latter employee would be categorized as job secure.

Finally, although we relied on nationally representative data for Finland, we cannot generalize our findings to other countries as the degree to which an unemployed individual draws from sufficient income replacement benefits could determine the effects of unemployment on health and well-being. Recent meta-analytical evidence (Paul and Moser 2009) indicates that the harmful effects of unemployment are linked to the degree of unemployment protection. Specifically, the higher the level of income replacement benefits, the lower the negative impact of being unemployed on health and well-being. As Finland provides the unemployed with a certain percentage of the last earned wage, the detrimental impact of being unemployed on health and well-being is expected to be smaller than in countries where no such income replacement benefits exist.

Implications for practice

Our findings have several implications for professionals and policy makers. An obvious implication is that interventions should aim at both job insecure permanent employees and unemployed individuals as both groups experience strain. However, it should be noted that programs designed to help unemployed individuals are unlikely to solve the negative

well-being and health consequences of job insecure permanent employees as only a subset of these insecure permanent employees will eventually experience actual job loss. Different interventions are needed to address the negative well-being and health consequences of perceived job insecurity. We will elaborate on potential intervention strategies for perceived job insecurity and unemployment separately.

In the case of *perceived job insecurity*, worksite health policy makers and practitioners should develop interventions and strategies that prevent perceptions of job insecurity from arising. As perceived job insecurity is suggested to be problematic in terms of lack of control (Vander Elst et al. 2011, 2014) interventions should target this perceived lack of control, for example by investing in *communication* (e.g. Kets de Vries and Balazs 1997; Vander Elst et al. 2010), *participation in decision making* (Probst 2005), and *perceived employability* (De Cuyper et al. 2012). As reducing perceptions of job insecurity is not always possible in economically turbulent times, intervention strategies should also target mechanisms that aim to reduce the negative impact of job insecurity on employees' well-being and health. In this respect, the same three intervention variables (i.e. communication, participation in decision making and perceived employability) are important. An increase in these three concepts also buffers the negative impact of job insecurity on employees' well-being and health (Jiang and Probst 2013; Kirves et al. 2011; Vander Elst et al. 2011). Specifically, Schweiger and DeNisi (1991) have suggested that organizations should strive to provide frequent, honest, and relevant information about the factors contributing to employees' perceptions of job insecurity. In addition, Kang et al. (2012) suggest that organizations may provide career guidance (e.g. emotional support, labour market knowledge, prospect on alternative employment opportunities) to their job insecure (permanent) employees as a way to increase internal and external employability. All of these proposed intervention strategies have the potential to reduce the negative effects of job insecurity on an employee's well-being and health.

When being confronted with *unemployment*, several scholars (e.g. Aho et al. 1996; Santamäki-Vuori 1996; Vuori and Vesalainen 1999) have suggested that favourable labour market knowledge, good individual skills, and sufficient work experience are essential for getting re-employed. Therefore, the Finnish labour authorities offer a considerable amount of guidance programs aimed to strengthen an individual's coping skills and personal abilities to help him or her deal more effectively with the negative consequences of unemployment. Such interventions were found to be beneficial for one's well-being (Mohr and Otto 2011). These guidance programs and interventions provide the unemployed with information about the labour market,

help them to enhance their job-seeking skills, and enhance their self-awareness and self-esteem. In Finland, the most common intervention strategy is labour market training in which the unemployed are provided with basic vocational training and government-supported short-term employment for approximately six months to promote re-employment (Vuori and Vesalainen 1999). Participation to such interventions strategies was more likely than non-participation to result in employed during the four-year follow-up (Aho et al. 1996). Similar results were found for government-supported short-term employment. Finnish long-term unemployed individuals, who participated to such a short-term subsidized job, had a better chance of getting re-employed than those who did not have a subsidized job (Santamäki-Vuori 1996). These interventions were found to be effective in the protection of psychological well-being and were most beneficial for the group of unemployed with the poorest mental health (Machin and Creed 2003; Vuori and Silvonen 2005). The protective mechanism behind these intervention strategies can be understood with reference to the latent deprivation model of Jahoda (1982) as they satisfy both manifest (i.e. income) and most latent (i.e. daily structure, social contacts outside the family, activity and the ability to deploy one's capacities to fully contribute to society) functions of employment that are important for one's mental and physical well-being.

Conclusion

Our findings suggest that (1) insecure permanent employment relates to more psychological complaints than short-term unemployment and secure permanent employment, (2) insecure permanent employment and long-term unemployment relates to more subjective complaints load and poorer health when compared to secure permanent employment, and (3) insecure permanent employment relates to higher life satisfaction than both short- and long-term unemployment. Given that job insecurity and unemployment rates are likely to increase as the labour market undergoes even more cutbacks, lay-offs, downsizing, or plant closures, policy makers in organizations and governments should invest more attention to job insecurity and unemployment and their detrimental consequences for well-being and health. Future research could further investigate individual and societal characteristics, which could modify the relationship between perceived job insecurity (acute versus chronic) or unemployment (short-term versus long-term) and the associated well-being and health outcomes, as well as the different pathways through which acute or chronic perceived job insecurity and short-term or long-term unemployment lead to impaired well-being and health.

Conflict of interest The authors declare that they have no conflict of interest.

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